

*B1*

SEQUENCE LISTING

<110> Allen, Stephen M.  
Hitz, William D.  
Rafalski, J. Antoni

*sub C1*

<120> SUCROSE TRANSPORT PROTEINS

<130> BB1162 US NA

<140>  
<141>

<150> 60/081 x 148  
<151> 1998-04-09

<150> PCT/US99/07562  
<151> 1999-04-07

<160> 28

<170> Microsoft Office 97

<210> 1  
<211> 2088  
<212> DNA  
<213> Zea mays

<400> 1

gcacgagaca	ctcctcacct	ctcctcgctc	cacgcacgcg	ctcttcacc	cgctggctat	60
tagtcgtgt	cccttgatt	tcgacactct	ctctagcggg	cgccgttcc	gccgcccgtcc	120
atcgatccta	gttagcttagc	tagctagggc	ccgaccgtcg	tctcggtgt	tgttgacagg	180
tcccgtacgt	gtgtgctcgc	catggctcgt	ggcgacggcg	ggcagctggc	ggagctgtcc	240
gccccgggtcc	gccccgggtcc	cgcggtggtg	gacacacgtgg	ccccgatcag	cctcgggagg	300
ctcatcctcg	ccggcatggt	cgccggcgcc	gtggagtacg	gtctggcgct	gcagctctcc	360
ctcctcaca	ccatcgtcga	gactctgggg	ctttaacatg	cgctcaacttc	attcatgtgg	420
ctctgcggcc	ctattgcccgg	cttagtggtc	caaccgctgg	ttggcctgtta	cagcgcacagg	480
tgtacatcga	gtatggggag	acggaggccg	tttatacgtga	cagggtgcatt	gtctatctgc	540
gttgcgtca	ttgttgcgg	attctcgta	gacatcggt	ctgctctagg	ggacacgaag	600
gaacactgca	gcctctacca	cggtcctcg	tggcacgtcg	cgatcgta	cgttctgggg	660
ttttggctcc	ttgacttctc	caacaacact	gtgcagggtc	cagcacgtgc	tatgtatggct	720
gatctatgtg	accatcatgg	gccaagtgcg	gtaactcata	tcttcgttc	ttggatggcg	780
ctggaaaca	tcctaggcta	ctcctctggc	tccacgaaca	attggcacaa	gtggtttccc	840
ttccttaaaa	cgagcgcctg	ctgtgaggcc	tgtgcgaacc	tgaagggtgc	atttctgtg	900
gccgtgtgt	tccttagtcct	gtgcctgacg	gtaaccctga	tcttcgtccaa	ggaggtgccg	960
tacagagcga	acgagaaccc	cccgacgacg	aaggccggcg	gcgagggtcg	gactgaggct	1020
accggggccac	ttgcccgtct	caagggtttc	aaggacgtcg	ctcccggtat	gccgtccgt	1080
ctcctcgta	ctgccccatc	ctggcttgc	tggttcccg	tcatccctata	cgacaccgac	1140
tggatggggcc	gggagatcta	ccacggcgac	cccaagggga	gcaacgccc	gatctcgccg	1200
ttcaacgaag	gtgtccgagt	ccgcgcgttc	gggctgtac	tcaactcggt	tattcttaggg	1260
ttcagctcg	tcctgatcga	gccccatgtc	cggaagggtcg	ggccgagggt	gtgtgggtg	1320
acgagcaact	tcatggtctg	cgtccccatg	cgccgcaccc	cgctgtatcg	tttctgtcg	1380
ctcaggact	accacgggt	cgtcaaggac	gccatcaccc	cgaaacgccc	catcaaggcc	1440
gtctgcctcg	tcctttcgc	cttcctggc	gtccctctcg	ccatccgtta	caggtcccg	1500
ttcgcgtgt	ccgcgcgt	ggccgcacc	cgccggccggcg	ggcaggggct	gtgcacccgg	1560
gtcctcaaca	tctccatcg	catccctcg	gtgatcatcg	cgctggcgcc	cgcccggtgg	1620
gacgcgtgt	tcgggaaggg	caacatcccg	cggttcggcg	tgcgtcgcc	tttcgcactc	1680
gtcggccgg	tcgtgggcgt	gttcctgtcg	cccaagatct	ccaagcgcca	gttccgggccc	1740
gtcagcgcgg	gcccactg	atcgaacccg	gccggggccg	gccccggca	cgcagcccg	1800
caagagctgt	atgttgcgt	gagttgaaca	gaaaccatgc	atgtgtgtt	ctgttagttct	1860
ttgtttgtg	gtcgatcgat	gggcgttgcg	tggcagcgtg	ggcaagcgag	gcgagggtcg	1920

cggatccaaa aaaaggccca ttcgatcaat caatgtgt tagagtacaa ctagacgatg 1980  
atgttacat catttgcctt taatacatac cggtttctat tgtcttaaa aaaaaaaaaa 2040  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2088

<210> 2  
<211> 519  
<212> PRT  
<213> Zea mays

<400> 2  
Met Ala Arg Gly Asp Gly Gly Gln Leu Ala Glu Leu Ser Ala Gly Val  
1 5 10 15  
Arg Gly Ala Ala Ala Val Val Asp His Val Ala Pro Ile Ser Leu Gly  
20 25 30  
Arg Leu Ile Leu Ala Gly Met Val Ala Gly Gly Val Gln Tyr Gly Trp  
35 40 45  
Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln Thr Leu Gly Leu  
50 55 60  
Ser His Ala Leu Thr Ser Phe Met Trp Leu Cys Gly Pro Ile Ala Gly  
65 70 75 80  
Leu Val Val Gln Pro Leu Val Gly Leu Tyr Ser Asp Arg Cys Thr Ser  
85 90 95  
Arg Trp Gly Arg Arg Pro Phe Ile Leu Thr Gly Cys Met Leu Ile  
100 105 110  
Cys Val Ala Val Ile Val Val Gly Phe Ser Ser Asp Ile Gly Ala Ala  
115 120 125  
Leu Gly Asp Thr Lys Glu His Cys Ser Leu Tyr His Gly Pro Arg Trp  
130 135 140  
His Ala Ala Ile Val Tyr Val Leu Gly Phe Trp Leu Leu Asp Phe Ser  
145 150 155 160  
Asn Asn Thr Val Gln Gly Pro Ala Arg Ala Met Met Ala Asp Leu Cys  
165 170 175  
Asp His His Gly Pro Ser Ala Ala Asn Ser Ile Phe Cys Ser Trp Met  
180 185 190  
Ala Leu Gly Asn Ile Leu Gly Tyr Ser Ser Gly Ser Thr Asn Asn Trp  
195 200 205  
His Lys Trp Phe Pro Phe Leu Lys Thr Ser Ala Cys Cys Glu Ala Cys  
210 215 220  
Ala Asn Leu Lys Gly Ala Phe Leu Val Ala Val Val Phe Leu Val Leu  
225 230 235 240  
Cys Leu Thr Val Thr Leu Ile Phe Ala Lys Glu Val Pro Tyr Arg Ala  
245 250 255  
Asn Glu Asn Leu Pro Thr Thr Lys Ala Gly Gly Glu Val Glu Thr Glu  
260 265 270

Pro Thr Gly Pro Leu Ala Val Leu Lys Gly Phe Lys Asp Leu Pro Pro  
275 280 285

Gly Met Pro Ser Val Leu Leu Val Thr Ala Ile Thr Trp Leu Ser Trp  
290 295 300

Phe Pro Phe Ile Leu Tyr Asp Thr Asp Trp Met Gly Arg Glu Ile Tyr  
305 310 315 320

His Gly Asp Pro Lys Gly Ser Asn Ala Gln Ile Ser Ala Phe Asn Glu  
325 330 335

Gly Val Arg Val Gly Ala Phe Gly Leu Leu Leu Asn Ser Val Ile Leu  
340 345 350

Gly Phe Ser Ser Phe Leu Ile Glu Pro Met Cys Arg Lys Val Gly Pro  
355 360 365

Arg Val Val Trp Val Thr Ser Asn Phe Met Val Cys Val Ala Met Ala  
370 375 380

Ala Thr Ala Leu Ile Ser Phe Trp Ser Leu Arg Asp Tyr His Gly Tyr  
385 390 395 400

Val Gln Asp Ala Ile Thr Ala Asn Ala Ser Ile Lys Ala Val Cys Leu  
405 410 415

Val Leu Phe Ala Phe Leu Gly Val Pro Leu Ala Ile Leu Tyr Ser Val  
420 425 430

Pro Phe Ala Val Thr Ala Gln Leu Ala Ala Thr Arg Gly Gly Gln  
435 440 445

Gly Leu Cys Thr Gly Val Leu Asn Ile Ser Ile Val Ile Pro Gln Val  
450 455 460

Ile Ile Ala Leu Gly Ala Gly Pro Trp Asp Ala Leu Phe Gly Lys Gly  
465 470 475 480

Asn Ile Pro Ala Phe Gly Val Ala Ser Ala Phe Ala Leu Val Gly Gly  
485 490 495

Val Val Gly Val Phe Leu Leu Pro Lys Ile Ser Lys Arg Gln Phe Arg  
500 505 510

Ala Val Ser Ala Gly Gly His  
515

<210> 3

<211> 825

<212> DNA

<213> Zea mays

<400> 3

gcacgagtta agttggatct cttctgatct gtactcaagc aaacttcatc acatcatcg 60  
ggcaaataaa acagtcaaga tcacggcatt gttgttttc tctttctcg gattgccact 120  
ctccatcaact tacagcgttc cgtttctgt gactgctgag ctgactgccc gtacaggagg 180  
tggacaaggt ttggccacag gagtcctaaa tcttgctatc gtggttcccc agatagtagt 240  
gtcgcttgg a caggtccat gggacgctct gtatggagga gggataaccc cggcggtcgt 300  
cttggcttcg gtcttctccc tggcagcagg tttgtctcgca gttctcaagc tgccaaagct 360  
gtccaactcg taccaatctg ccgggttcca tggatttggc tttatgtctcat gccccaaaca 420

cccccgctcg ccatgtaaaaa catcacacca acacttggcc ccatttgcc attcgttac 480  
agagaatga ttctttttc ctcgtacaac tacagaataa tgacagtcaa agtagggatt 540  
taggtgagag agagagagag gcttagttagg ttgtatgtgaa ggtgtaaaag ctgtatcctc 600  
cttttttgtt ttttggaca gtgtatgtaa gagctgtcca caagaaaatt 660  
tacaagtgg tgaacctgccc ctcgttgta cattgtacta ctactacatg acaatcatat 720  
gtccttgtc ttatccaag gttgaagacg taaactgagg ccatcttattt atcttggcc 780  
atgaaaaaaaaaaaaaaa aaaaaaaaaact cgaaaactagt tctct 825

<210> 4  
<211> 133  
<212> PRT  
<213> Zea mays

<400> 4  
His Glu Leu Ser Trp Ile Ser Ser Asp Leu Tyr Ser Ser Lys Leu His  
1 5 10 15  
  
His Ile Ile Gly Ala Asn Lys Thr Val Lys Ile Thr Ala Leu Val Val  
20 25 30  
  
Phe Ser Leu Leu Gly Leu Pro Leu Ser Ile Thr Tyr Ser Val Pro Phe  
35 40 45  
  
Ser Val Thr Ala Glu Leu Thr Ala Gly Thr Gly Gly Gln Gly Leu  
50 55 60  
  
Ala Thr Gly Val Leu Asn Leu Ala Ile Val Val Pro Gln Ile Val Val  
65 70 75 80  
  
Ser Leu Gly Ala Gly Pro Trp Asp Ala Leu Tyr Gly Gly Asn Thr  
85 90 95  
  
Pro Ala Phe Val Leu Ala Ser Val Phe Ser Leu Ala Ala Gly Val Leu  
100 105 110  
  
Ala Val Leu Lys Leu Pro Lys Leu Ser Asn Ser Tyr Gln Ser Ala Gly  
115 120 125  
  
Phe His Gly Phe Gly  
130

<210> 5  
<211> 1977  
<212> DNA  
<213> Zea mays

<400> 5  
gcggcggacc acgtggcgcc gatcagcctc ggcaggctca tcctcgccgg catggtcgcc 60  
ggcggcgtgc agtacggctg ggcgtgcag ctctccctcc tcacgcctta cgtgcagact 120  
ctggggctc cacaatgcct cacttcattc atgtggctat ggggtcctat tgctggctta 180  
gtggtccaaac cgctgggtgg cctgtacagc gataggtgca cagcaagatg gggaaagacgc 240  
aggccatatta tctgtatagg atgcgtgctc atctgccttg ccgtcattgt tggtggcttc 300  
tcgtccgaca tggagactgc tctagggac acaaaggaaac actgcagcct ctaccacggc 360  
cctcggtggc atgtgcgtatc cgtgtacgtt ctggggttt ggctcccttga ctgtccaaac 420  
aataactgtgc aagggtccagc gcgtgtatg atggctgatc tgcgtggcata tcattggcc 480  
agtgcagcca actcaatctt ctgttcttgg atggcgctgg gaaacatctt aggctatcc 540  
tctggctcca caaacaactg gcacaagtgg tttccgttcc ttatgacaaa cgcgtgtgt 600  
gaagcgtcg caaacctgaa aggccgtttt ctgggtggctg tggtgttctt aatcatgtgc 660  
ttgactataa ccctgttctt cgccaaaggaa gtgcctaca gagaaaacca gaacctcccc 720  
acaaaggcaa acggcgaggt cgagactgaa cttccggcc cactcgctgt gctcaaggcc 780  
ttcaagaact tgcccacggg gatgccgtcc gtgtccctcg taactggact cacctggctc 840

tcttggttcc cgttcatcct ctacgacacc gactggatgg gccgtgagat ctaccacggc 900  
 gaccccaagg gtagcaacgc tcagatctcg gcgttcgacg aaggcgtcag agttggctcg 960  
 ttcgggctgc tgctcaactc gatcgttcta ggattcagct cgttcctgat cgagccatcg 1020  
 tgccggaagg tcgggcccag ggtgggtgtgg gtgacgagca acttcatggc ctgcgtcgcc 1080  
 atggcggcca ccgcgctgat cagcttctgg tcgctcaagg actaccacgg atacgtgcag 1140  
 gacgccatca ccgcgcagcac gagcatcaag gccgtctgcc tcgtcctt cgcgttctg 1200  
 ggtgtccctc tcgcccattcgt acagcgtc ccgttcgccc tgacggcga gctggcggcc 1260  
 acgaaggcgc gccggcaggg gctgtgcacc ggcgtctca acatctccat cgtcatccct 1320  
 caggtgatca tcgcccgtggg cgccggcccg tgggacgcgc tgttcggcaa gggcaacatc 1380  
 ccggcgttgc gcgtggcgtc ggggttcgccc tcatcgccg gcgtcgtggg cgtgttctg 1440  
 ctgcccagaaga ttcggcaagcg ccagttccgc gccgtcagcg cggccggcca ctgatcgccg 1500  
 ccggccgcgc ggagcacggc acggccgcac agcccaagccg tgctagagct gtatgtttg 1560  
 aaagttgaaa cagaataaga agcggcgcga acgagaaaac catgcatgtc atgtgtgtgc 1620  
 ttttgtgtg tgggggtgg ggcaagcgg gcgagggtgtg tggaggtgaa gtgaagggtga 1680  
 gcatatccag caccagctgg taccagggtc ggggtctctgt gctagtgtcta ttagctagtg 1740  
 taaggagcga gttaggtcagt taaggctggt gcgtcgtgag ggctgtcttg tggtagcta 1800  
 cagcagacgg ttcatcgaaa ggattatttcg tgcagtatata acagtacaac tagacaatga 1860  
 tggtagtggat tggtagtggat ctagaggcct atagccctat actactgtgt attgtccgccc 1920  
 gtttttagttt ttgggtccca tcccatcaat gcaaccgcct tggtttaaaa aaaaaaaaaa 1977

<210> 6  
 <211> 497  
 <212> PRT  
 <213> Zea mays

<400> 6  
 Ala Ala Asp His Val Ala Pro Ile Ser Leu Gly Arg Leu Ile Leu Ala  
 1 5 10 15  
  
 Gly Met Val Ala Gly Gly Val Gln Tyr Gly Trp Ala Leu Gln Leu Ser  
 20 25 30  
  
 Leu Leu Thr Pro Tyr Val Gln Thr Leu Gly Leu Ser His Ala Leu Thr  
 35 40 45  
  
 Ser Phe Met Trp Leu Cys Gly Pro Ile Ala Gly Leu Val Val Gln Pro  
 50 55 60  
  
 Leu Val Gly Leu Tyr Ser Asp Arg Cys Thr Ala Arg Trp Gly Arg Arg  
 65 70 75 80  
  
 Arg Pro Phe Ile Leu Ile Gly Cys Met Leu Ile Cys Leu Ala Val Ile  
 85 90 95  
  
 Val Val Gly Phe Ser Ser Asp Ile Gly Ala Ala Leu Gly Asp Thr Lys  
 100 105 110  
  
 Glu His Cys Ser Leu Tyr His Gly Pro Arg Trp His Ala Ala Ile Val  
 115 120 125  
  
 Tyr Val Leu Gly Phe Trp Leu Leu Asp Phe Ser Asn Asn Thr Val Gln  
 130 135 140  
  
 Gly Pro Ala Arg Ala Met Met Ala Asp Leu Cys Gly His His Gly Pro  
 145 150 155 160  
  
 Ser Ala Ala Asn Ser Ile Phe Cys Ser Trp Met Ala Leu Gly Asn Ile  
 165 170 175  
  
 Leu Gly Tyr Ser Ser Gly Ser Thr Asn Asn Trp His Lys Trp Phe Pro  
 180 185 190

Phe Leu Met Thr Asn Ala Cys Cys Glu Ala Cys Ala Asn Leu Lys Gly  
195 200 205

Ala Phe Leu Val Ala Val Val Phe Leu Ile Met Cys Leu Thr Ile Thr  
210 215 220

Leu Phe Phe Ala Lys Glu Val Pro Tyr Arg Gly Asn Gln Asn Leu Pro  
225 230 235 240

Thr Lys Ala Asn Gly Glu Val Glu Thr Glu Pro Ser Gly Pro Leu Ala  
245 250 255

Val Leu Lys Gly Phe Lys Asn Leu Pro Thr Gly Met Pro Ser Val Leu  
260 265 270

Leu Val Thr Gly Leu Thr Trp Leu Ser Trp Phe Pro Phe Ile Leu Tyr  
275 280 285

Asp Thr Asp Trp Met Gly Arg Glu Ile Tyr His Gly Asp Pro Lys Gly  
290 295 300

Ser Asn Ala Gln Ile Ser Ala Phe Asp Glu Gly Val Arg Val Gly Ser  
305 310 315 320

Phe Gly Leu Leu Leu Asn Ser Ile Val Leu Gly Phe Ser Ser Phe Leu  
325 330 335

Ile Glu Pro Met Cys Arg Lys Val Gly Pro Arg Val Val Trp Val Thr  
340 345 350

Ser Asn Phe Met Val Cys Val Ala Met Ala Ala Thr Ala Leu Ile Ser  
355 360 365

Phe Trp Ser Leu Lys Asp Tyr His Gly Tyr Val Gln Asp Ala Ile Thr  
370 375 380

Ala Ser Thr Ser Ile Lys Ala Val Cys Leu Val Leu Phe Ala Phe Leu  
385 390 395 400

Gly Val Pro Leu Ala Ile Leu Tyr Ser Val Pro Phe Ala Val Thr Ala  
405 410 415

Gln Leu Ala Ala Thr Lys Gly Gly Gln Gly Leu Cys Thr Gly Val  
420 425 430

Leu Asn Ile Ser Ile Val Ile Pro Gln Val Ile Ile Ala Leu Gly Ala  
435 440 445

Gly Pro Trp Asp Ala Leu Phe Gly Lys Gly Asn Ile Pro Ala Phe Gly  
450 455 460

Val Ala Ser Gly Phe Ala Leu Ile Gly Gly Val Val Gly Val Phe Leu  
465 470 475 480

Leu Pro Lys Ile Ser Lys Arg Gln Phe Arg Ala Val Ser Ala Gly Gly  
485 490 495

His

<210> 7  
<211> 1653  
<212> DNA  
<213> Oryza sativa

<400> 7

gcacgagatc actgcttcca tcgctgccgc agttctcacc gtcggattct ccggccgaccc 60  
cggccgaatc ttccggcgatt ccatcacccc gggctccacc cgcctcggcg ccatcatcg 120  
ctacctcgtc ggcttctggc tcctcgacgt cggcaacaac gctacacagg gaccctgcag 180  
ggcccttcgc ggcgacccca cggagaatga cccaaaggagg actcggatag ctaatgccta 240  
cttctcattt ttcatggccc tggaaacat acttggatat gccactggag catacagtg 300  
ctggtaacaag atattcccg taccgggtac tccatcatgt agcatcgat gtgccaactt 360  
caagtctgcc ttctacttg atattatcat tttgggtggc actacatgca tcactgtagc 420  
atcagtgcaa gagcctcaat ccttggaaag tggatgaagca gatcacccta gcacagaaca 480  
ggaagcttc ctctgggaac tttttggatc attccggatc tttacattac cgggttggat 540  
gttggatt gttaactgccc tcacatggat tggatgggtt ccattatcc tctttgatac 600  
cgattggatg ggtcgagaga tctatcggtt aagtccagat gatccaagta taactcagag 660  
ctatcatgtat ggtgtggaaa tgggttcttt tggatcgatc ctgaactcg tccttcttgg 720  
attcacttctt attgtacttag agaagttatg tcggaagtgg ggagctggac tgggtgtggg 780  
tgtctccaat atccataatgg cattgtgtt tggatggcaatc cttgttaaa catatgtggc 840  
aaagaataatg gattatccac ctagtggatg accaccaacc ggcattgtca ttgcttcct 900  
ggtagttttt acaaattttttag gagcggccct ggcgatcacc tacagtatac catatgc 960  
ggctgttagt cgggttggaaa atctgggact tggccaaggt ctagcaatgg gcattcttaa 1020  
tttggctatt gtcataccac aggttattgt gtcactgggtt agcggccctt gggaccaact 1080  
gttgggtgtt ggcaatgcac cagcccttgc agtggctgtt gtcgtatctt ttatcggtgg 1140  
gctgggtggctt atctgggccc ttccacgagc cccgatttgc tcaaggagga gaggtcaccg 1200  
ataagaataat tgctacatataa aatttgcgg ccatttttgc caattcgact cataagaggc 1260  
actcggaaacg ctatgcgttgc catggggaaa ttgtatattt tctccgaatc aagaagggg 1320  
taatgcgttgc ttctccatgt agcttattttt gccttttca tgccggatca tcataatgt 1380  
tcgtacatttgc tggatcttgc tggatgttgc cattggatgt tggtcattttgc tagagatact 1440  
agtgaataaa agttgcggaa gttgggttgc acggagggaaaat tctgtgttgc atgtcgttca 1500  
tctgtgttgc acacggatgttgc aggagccgaa tagcatgttcc atgggttttc atcaaatgtt 1560  
gtatcatcat ttgttttttgc atacgttgc acgggttgc tgctgtgtga atatataatgtt 1620  
atggaaatata tcgagaaaaaaa aaaaaaaaaaaa aaa 1653

<210> 8  
<211> 400  
<212> PRT  
<213> Oryza sativa

<400> 8

His Glu Ile Thr Ala Ser Ile Ala Ala Ala Val Leu Thr Val Gly Phe  
1 5 10 15

Ser Ala Asp Leu Gly Arg Ile Phe Gly Asp Ser Ile Thr Pro Gly Ser  
20 25 30

Thr Arg Leu Gly Ala Ile Ile Val Tyr Leu Val Gly Phe Trp Leu Leu  
35 40 45

Asp Val Gly Asn Asn Ala Thr Gln Gly Pro Cys Arg Ala Phe Leu Ala  
50 .. 55 60

Asp Leu Thr Glu Asn Asp Pro Arg Arg Thr Arg Ile Ala Asn Ala Tyr  
65 70 75 80

Phe Ser Leu Phe Met Ala Leu Gly Asn Ile Leu Gly Tyr Ala Thr Gly  
85 90 95

Ala Tyr Ser Gly Trp Tyr Lys Ile Phe Pro Phe Thr Val Thr Pro Ser  
100 105 110

Cys Ser Ile Ser Cys Ala Asn Phe Lys Ser Ala Phe Leu Leu Asp Ile  
115 120 125

Ile Ile Leu Val Val Thr Thr Cys Ile Thr Val Ala Ser Val Gln Glu  
130 135 140

Pro Gln Ser Phe Gly Ser Asp Glu Ala Asp His Pro Ser Thr Glu Gln  
145 150 155 160

Glu Ala Phe Leu Trp Glu Leu Phe Gly Ser Phe Arg Tyr Phe Thr Leu  
165 170 175

Pro Val Trp Met Val Leu Ile Val Thr Ala Leu Thr Trp Ile Gly Trp  
180 185 190

Phe Pro Phe Ile Leu Phe Asp Thr Asp Trp Met Gly Arg Glu Ile Tyr  
195 200 205

Arg Gly Ser Pro Asp Asp Pro Ser Ile Thr Gln Ser Tyr His Asp Gly  
210 215 220

Val Arg Met Gly Ser Phe Gly Leu Met Leu Asn Ser Val Leu Leu Gly  
225 230 235 240

Phe Thr Ser Ile Val Leu Glu Lys Leu Cys Arg Lys Trp Gly Ala Gly  
245 250 255

Leu Val Trp Gly Val Ser Asn Ile Leu Met Ala Leu Cys Phe Val Ala  
260 265 270

Met Leu Val Ile Thr Tyr Val Ala Lys Asn Met Asp Tyr Pro Pro Ser  
275 280 285

Gly Val Pro Pro Thr Gly Ile Val Ile Ala Ser Leu Val Val Phe Thr  
290 295 300

Ile Leu Gly Ala Pro Leu Ala Ile Thr Tyr Ser Ile Pro Tyr Ala Met  
305 310 315 320

Ala Ala Ser Arg Val Glu Asn Leu Gly Leu Gly Gln Gly Leu Ala Met  
325 330 335

Gly Ile Leu Asn Leu Ala Ile Val Ile Pro Gln Val Ile Val Ser Leu  
340 345 350

Gly Ser Gly Pro Trp Asp Gln Leu Phe Gly Gly Asn Ala Pro Ala  
355 360 365

Phe Ala Val Ala Ala Ala Ser Phe Ile Gly Gly Leu Val Ala Ile  
370 375 380

Leu Gly Leu Pro Arg Ala Arg Ile Ala Ser Arg Arg Arg Gly His Arg  
385 390 395 400

<210> 9  
<211> 2375  
<212> DNA  
<213> Oryza sativa

<400> 9

gcacgagggtt ctaaccgcgc cttcgccga gggaggccga ccaacgcac aatcaaacac 60  
 acaagcacac cacgcggacg cagcagcagg ggaggagaca atttcctatt cttcctcgcc 120  
 ccgcgtcgcc tcgcctgagt ctgactctcc aaacgcccac cagtgcacgc gcgagccttg 180  
 ccccttgcgc ggcagatct caccaaaccc taccagatct ggcgcgcgc atggactccg 240  
 ccgcccggcg tggcggccctc acggccatcc gcctgcctc cgcgcacctc cgcgcacccg 300  
 agatggagct cgtcagccctc aacggcggca cccccggcgg aggctccccc aaggaccccg 360  
 acgccacgc acaagcagggg ccccccggc cccgtaccac caccaccagg aagctcgcc 420  
 tcgcctgcat ggtcggccgc ggcgtgcagt tcggctggc gttcagctc tcgctcctca 480  
 cgcctacat ccagaccctca ggaatagacc atgccatggc atcattcatt tggctttgtg 540  
 gacctattac tggttttgtt gttcaaccat gtgttgggtt ctggagtgc aatggccgtt 600  
 caaagtatgg aagaaggaga ccgttcattt tggctggatg ctgtatgata tgctttgtg 660  
 taacttaat cggatttct gcagacccctt gttacattt aggagatacc actgagcact 720  
 gcagttacata taaagggtca agatttcgag cagctattat ttgcgttctt ggggtctgga 780  
 tggatct cgcacaaatc acagtcaag gtcctgctcg tgcccttta gctgacccctt 840  
 caggtcctga tcagtgtaat tctgcaatc caatttttg cacatggatg gctgttggaa 900  
 acgttcttgg ttttcatct ggtgttagt ggaattggc caagtggtt cctttctaa 960  
 tgacaagagc atgctgtgaa gctgttagt atttggaaagc cgctttctg gttgcagtt 1020  
 tttttttt gttttgtatg tctgttaccc ttttttttgc tgaagagatcc cgcgttggaa 1080  
 caacagatgc acaacgattt tctgattctg cgcctctcctt gaatggttt agagatgata 1140  
 acaatgcac aatggaaacctt cgtatggag cacttcctaa tggcataca gatggaaagca 1200  
 atgcccacg taactccaaac gctgaggactt ccaattcaaa cagagagaat gtcgaagtt 1260  
 tcaatgtgg accaggagca gttttggta atattttgac tagcatgagg catctaccc 1320  
 ctggaatgtt ctctgttctt ctgttatgg ctctaaatc gttgtcggtt ttccctttt 1380  
 tccttttttga tactgactgg atggacgtt aggtttacca tgggaccca aatggcaact 1440  
 tgagtgaaag gaaagcttat gacaacgggt tccgagaagg tgcattttgtt ttgctattga 1500  
 attcagggtt ctttggaaattt gggcttcc ttgttgcactt actatggca ctgatgggtt 1560  
 cttagactggt ttggcaatc agcaacttca cagtgtttt ctgcattgtt gctacagcaa 1620  
 tattaaatggt gatctttttt gattttactt caagttaaat tcaccacatc attggagcaa 1680  
 ataaaaacagt gaagaattca gccttgattt ttttctccctt acttggactt ccactctcga 1740  
 tcacatatacg ctttccctttt tctgtgactt ctgagcttgc tgcttggaaaca ggagggtggac 1800  
 aaggcttggc aacaggagtc ctgaacccctt caatcggtt tcccgagat gtagtgtcac 1860  
 taggacggc tccatggat gtccttttggggaggaa cgtccctgtt ttcgccttgg 1920  
 cttccctttt ctcacttagga gctgggttcc tccgcgttcc taagtttccctt aagctgccaa 1980  
 actcttacag atctgtggg ttccatggat ttggctggac agaacaccag ccgcattgtt 2040  
 tgtaacatttggaaatggcaatc ctccattttgc catttcgtt acagtggaaat gattttttt 2100  
 acctactactt acaacagaat aagctgaaaa gatagagattt aggatagaga gcttagtaac 2160  
 tagtccagttt aggttgcattt gcatataagg caattggaaat gtttgcatttgc tttatctact 2220  
 tttttggacgg aaaaatgtaa gctctggcccaatggatggc cggatagattt ttacaatgg 2280  
 tgtaatcatg tactatataat aacacgtttt ggtcacagct tgccaaatggt catgtataatg 2340  
 actgtacta aaaaaaaaaaaaaaaa aaaaaaaaaaaaaaaa aaaaaa 2375

<210> 10  
 <211> 667  
 <212> PRT  
 <213> Oryza sativa

<400> 10  
 Pro Ala Pro Ser Pro Arg Glu Ala Asp Gln Arg Ile Asn Gln Thr His  
 1 5 10 15

Lys His Thr Thr Arg Thr Gln Gln Gly Arg Arg Gln Phe Pro Ile  
 20 25 30

Leu Pro Arg Pro Ala Ser Pro Arg Leu Ser Leu Thr Leu Gln Thr Pro  
 35 40 45

Thr Ser Asp Ala Ala Ser Leu Ala Pro Cys Pro Arg Arg Ser His Gln  
 50 55 60

Thr Leu Pro Asp Leu Arg Pro Ala Met Asp Ser Ala Ala Gly Gly Gly  
 65 70 75 80

Gly Leu Thr Ala Ile Arg Leu Pro Tyr Arg His Leu Arg Asp Ala Glu  
85 90 95

Met Glu Leu Val Ser Leu Asn Gly Gly Thr Pro Arg Gly Gly Ser Pro  
100 105 110

Lys Asp Pro Asp Ala Thr His Gln Gln Gly Pro Pro Ala Ala Arg Thr  
115 120 125

Thr Thr Arg Lys Leu Val Leu Ala Cys Met Val Ala Ala Gly Val  
130 135 140

Gln Phe Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Ile Gln  
145 150 155 160

Thr Leu Gly Ile Asp His Ala Met Ala Ser Phe Ile Trp Leu Cys Gly  
165 170 175

Pro Ile Thr Gly Phe Val Val Gln Pro Cys Val Gly Val Trp Ser Asp  
180 185 190

Lys Cys Arg Ser Lys Tyr Gly Arg Arg Arg Pro Phe Ile Leu Ala Gly  
195 200 205

Cys Leu Met Ile Cys Phe Ala Val Thr Leu Ile Gly Phe Ser Ala Asp  
210 215 220

Leu Gly Tyr Ile Leu Gly Asp Thr Thr Glu His Cys Ser Thr Tyr Lys  
225 230 235 240

Gly Ser Arg Phe Arg Ala Ala Ile Ile Phe Val Leu Gly Phe Trp Met  
245 250 255

Leu Asp Leu Ala Asn Asn Thr Val Gln Gly Pro Ala Arg Ala Leu Leu  
260 265 270

Ala Asp Leu Ser Gly Pro Asp Gln Cys Asn Ser Ala Asn Ala Ile Phe  
275 280 285

Cys Thr Trp Met Ala Val Gly Asn Val Leu Gly Phe Ser Ser Gly Ala  
290 295 300

Ser Gly Asn Trp His Lys Trp Phe Pro Phe Leu Met Thr Arg Ala Cys  
305 310 315 320

Cys Glu Ala Cys Ser Asn Leu Lys Ala Ala Phe Leu Val Ala Val Val  
325 330 335

Phe Leu Leu Phe Cys Met Ser Val Thr Leu Tyr Phe Ala Glu Glu Ile  
340 345 350

Pro Leu Glu Pro Thr Asp Ala Gln Arg Leu Ser Asp Ser Ala Pro Leu  
355 360 365

Leu Asn Gly Ser Arg Asp Asp Asn Asn Ala Ser Asn Glu Pro Arg Asn  
370 375 380

Gly Ala Leu Pro Asn Gly His Thr Asp Gly Ser Asn Val Pro Ala Asn  
385 390 395 400

Ser Asn Ala Glu Asp Ser Asn Ser Asn Arg Glu Asn Val Glu Val Phe  
405 410 415

Asn Asp Gly Pro Gly Ala Val Leu Val Asn Ile Leu Thr Ser Met Arg  
420 425 430

His Leu Pro Pro Gly Met Tyr Ser Val Leu Leu Val Met Ala Leu Thr  
435 440 445

Trp Leu Ser Trp Phe Pro Phe Phe Leu Phe Asp Thr Asp Trp Met Gly  
450 455 460

Arg Glu Val Tyr His Gly Asp Pro Asn Gly Asn Leu Ser Glu Arg Lys  
465 470 475 480

Ala Tyr Asp Asn Gly Val Arg Glu Gly Ala Phe Gly Leu Leu Asn  
485 490 495

Ser Val Val Leu Gly Ile Gly Ser Phe Leu Val Asp Pro Leu Cys Arg  
500 505 510

Leu Met Gly Ala Arg Leu Val Trp Ala Ile Ser Asn Phe Thr Val Phe  
515 520 525

Ile Cys Met Leu Ala Thr Ala Ile Leu Ser Trp Ile Ser Phe Asp Leu  
530 535 540

Tyr Ser Ser Lys Leu His His Ile Ile Gly Ala Asn Lys Thr Val Lys  
545 550 555 560

Asn Ser Ala Leu Ile Val Phe Ser Leu Leu Gly Leu Pro Leu Ser Ile  
565 570 575

Thr Tyr Ser Val Pro Phe Ser Val Thr Ala Glu Leu Thr Ala Gly Thr  
580 585 590

Gly Gly Gly Gln Gly Leu Ala Thr Gly Val Leu Asn Leu Ala Ile Val  
595 600 605

Val Pro Gln Ile Val Val Ser Leu Gly Ala Gly Pro Trp Asp Ala Leu  
610 615 620

Phe Gly Gly Asn Val Pro Ala Phe Ala Leu Ala Ser Val Phe Ser  
625 630 635 640

Leu Gly Ala Gly Val Leu Ala Val Leu Lys Leu Pro Lys Leu Pro Asn  
645 650 655

Ser Tyr Arg Ser Ala Gly Phe His Gly Phe Gly  
660 665

<210> 11

<211> 1885

<212> DNA

<213> Glycine max

<400> 11

gcacgaggag agaaaagagaaa aacatttaaa aaaatataaa aaaaaataaa cctcttttc 60

tctctgaatt tctaaggctc tctcaaaata atggaggagc cacaaccagg acccagccg 120

ttacgaaaa tggatgggt gtcgtcaatg gcggccgta tccaattcgg gtggcccta 180

cagctctccc ttctcaccctt atatgttcaa accctaggcg tcccgatgc ttggcccta 240

tttatttggc tatgtggccc gatatctggg ctgctggcgc agccattgt gggctacagc 300  
 agcgaccat gccaatcccg tttcggtcggt cgccgtccct ttatccctagc cgggtcttg 360  
 gccgtcgcca ttgcgtgttt cctaattggt taacgcggccg atataggaca cgcggcaggc 420  
 gacaacctga cccaaaagac tcggccacgt gcagtggcga tcttcgtat cgggtttgg 480  
 atcctcgacg tggctaaca catgtccag ggtccatgcc gtgccttct gggcgaccc 540  
 gctgccccggg atgagaaaaa gacaaggca gccaatgcct tcttccttctt cttcatgcc 600  
 gtccggcaaca tcctggcata tgctgcggga tcctacgacg gcctccaccc cctcttcccc 660  
 ttcacggaaa cogaggcatg caacgtctc tgccaaacc tcaagagttt cttcttcttc 720  
 gctatcgatcc tcctgggtt cctcaccacc ttgggtctga ttaccgtgaa agaaaactccc 780  
 tacacgcca aggccagagaa ggaaaccgaa gatgcagaga agacacactt ctcgtgttc 840  
 tgccggagaac ttgtcttgc attcaagggg ctgaagaggc caatgtggat gttgatgttg 900  
 gtgaccggccg tgaactggat agcgtggatc ccttacttct tgatcgacac cgattggatg 960  
 ggtcggtgagg tgtaacgggtt tgacgtgggg cagaaggcgt acgattcggg agttcatgca 1020  
 ggttctctag ggctaatgtt gaatgcgggtg gtgttggctg tgatgttcat ggcaatttggaa 1080  
 ccgttggggc gtgtgggtgg gggaaatcaag tgggtgtggg gaatcgtaa catcttggat 1140  
 gctataatgtt tggaatgac cgttctcata acaaagatcg ctgagcatga acgtcttctt 1200  
 aaccctgtt tggttgggaa ccctccctc ggtatcaaag ttgggtccat ggttttcttc 1260  
 tctgtcttgc gaatccctct tgcgattact ttcaagtgtcc cattgtcttcat agcatctata 1320  
 tactccagca ctcccgagc aggccaaaggctt ctatctttgg gtgtccttaa tattgcaatt 1380  
 gtcgttccac agatgtatgtt atcaaccata agtggacccctt gggatgcctt gttcggcggt 1440  
 gggaaacttgc ctgcatttcgtt gttgggtgcg gtggccggccg tcgtgagtgc aatatttagca 1500  
 gttcttcttc tgccaaacttc aaagaaaggctt gatgagggtca gggcttcttag cctcaacatg 1560  
 ggaagtttgc attagtgtgtt ctattatagg gcttacatg tttcaacttac aaccttgcctt 1620  
 tgatatggaa aaaagaactt agtctttaga ttcaagttgg gtgtgtgcgt gtgtatatttt 1680  
 ggtttagac atgggtttta gatgcttcca tagccactt atgttcaagg acaatcattttt 1740  
 atttgcataac ttgggtgcga caattatacc gaatagaaaaa tcattaaaca tacatctttt 1800  
 tatttcacac attaaaaaaa tatcataata aatatatata ttatcatattt ataaaaagaaaa 1860  
 tatttgcataac ttgggtgcga caattatacc gaatagaaaaa tcattaaaca tacatctttt 1885

<210> 12  
 <211> 494  
 <212> PRT  
 <213> Glycine max

<400> 12  
 Met Glu Glu Pro Gln Pro Gly Pro Ser Pro Leu Arg Lys Met Ile Leu  
 1 5 10 15

Val Ser Ser Met Ala Ala Gly Ile Gln Phe Gly Trp Ala Leu Gln Leu  
 20 25 30

Ser Leu Leu Thr Pro Tyr Val Gln Thr Leu Gly Val Pro His Ala Trp  
 35 40 45

Ala Ser Phe Ile Trp Leu Cys Gly Pro Ile Ser Gly Leu Leu Val Gln  
 50 55 60

Pro Ile Val Gly Tyr Ser Ser Asp Arg Cys Gln Ser Arg Phe Gly Arg  
 65 70 75 80

Arg Arg Pro Phe Ile Leu Ala Gly Ser Leu Ala Val Ala Ile Ala Val  
 85 90 95

Phe Leu Ile Gly Tyr Ala Ala Asp Ile Gly His Ala Ala Gly Asp Asn  
 100 105 110

Leu Thr Gln Lys Thr Arg Pro Arg Ala Val Ala Ile Phe Val Ile Gly  
 115 120 125

Phe Trp Ile Leu Asp Val Ala Asn Asn Met Leu Gln Gly Pro Cys Arg  
 130 135 140

Ala Phe Leu Gly Asp Leu Ala Ala Gly Asp Glu Lys Lys Thr Lys Ala  
145 150 155 160

Ala Asn Ala Phe Phe Ser Phe Phe Met Ala Val Gly Asn Ile Leu Gly  
165 170 175

Tyr Ala Ala Gly Ser Tyr Asp Gly Leu His Arg Leu Phe Pro Phe Thr  
180 185 190

Glu Thr Glu Ala Cys Asn Val Phe Cys Ala Asn Leu Lys Ser Cys Phe  
195 200 205

Phe Phe Ala Ile Val Leu Leu Val Val Leu Thr Thr Leu Val Leu Ile  
210 215 220

Thr Val Lys Glu Thr Pro Tyr Thr Pro Lys Ala Glu Lys Glu Thr Glu  
225 230 235 240

Asp Ala Glu Lys Thr His Phe Ser Cys Phe Cys Gly Glu Leu Cys Leu  
245 250 255

Ala Phe Lys Gly Leu Lys Arg Pro Met Trp Met Leu Met Leu Val Thr  
260 265 270

Ala Val Asn Trp Ile Ala Trp Phe Pro Tyr Phe Leu Phe Asp Thr Asp  
275 280 285

Trp Met Gly Arg Glu Val Tyr Gly Gly Asp Val Gly Gln Lys Ala Tyr  
290 295 300

Asp Ser Gly Val His Ala Gly Ser Leu Gly Leu Met Leu Asn Ala Val  
305 310 315 320

Val Leu Ala Val Met Ser Leu Ala Ile Glu Pro Leu Gly Arg Val Val  
325 330 335

Gly Gly Ile Lys Trp Leu Trp Gly Ile Val Asn Ile Leu Leu Ala Ile  
340 345 350

Cys Leu Gly Met Thr Val Leu Ile Thr Lys Ile Ala Glu His Glu Arg  
355 360 365

Leu Leu Asn Pro Ala Leu Val Gly Asn Pro Ser Leu Gly Ile Lys Val  
370 375 380

Gly Ser Met Val Phe Phe Ser Val Leu Gly Ile Pro Leu Ala Ile Thr  
385 390 395 400

Phe Ser Val Pro Phe Ala Leu Ala Ser Ile Tyr Ser Ser Thr Ser Gly  
405 410 415

Ala Gly Gln Gly Leu Ser Leu Gly Val Leu Asn Ile Ala Ile Val Val  
420 425 430

Pro Gln Met Ile Val Ser Thr Ile Ser Gly Pro Trp Asp Ala Leu Phe  
435 440 445

Gly Gly Gly Asn Leu Pro Ala Phe Val Leu Gly Ala Val Ala Val  
450 455 460

Val Ser Ala Ile Leu Ala Val Leu Leu Leu Pro Thr Pro Lys Lys Ala  
465 470 475 480

Asp Glu Val Arg Ala Ser Ser Leu Asn Met Gly Ser Leu His  
485 490

```
<210> 13
<211> 1041
<212> DNA
<213> Glycine max
```

<220>  
<221> unsure  
<222> (1007)

<400> 13

gcacgagactc	acaactctctc	tttctttctt	cctgctgcta	caatatggag	cctctctt	60
ccaccaaaca	caacaacaat	ctctccaagg	cttcctccct	ccacacggag	gtccggccgc	120
cgaggccag	tcccctccgg	aagatcatgg	tggtgccctc	catccgcgc	ggggtcaat	180
tccgggtggc	cctacagctc	tctctactta	cccccctacgt	ccaactgctg	gggattcccc	240
acaacttggc	cgcccttcatc	tggctctgcg	gccccatctc	cggcatgctc	gtccagccca	300
tctgtggata	ccacacgac	cgctgcacct	cccgcttcgg	ccggccgcgc	cccttcatcg	360
ccgcccgtc	cctcgccgtc	gccatcgccg	tcttccttat	cggctacgccc	ggcggacctcg	420
gccacatgtt	cgggcactcc	ctagccaaaa	aaaccgcccc	gcccacatcg	atcttcgttg	480
tccggcttctg	gattctcgac	gtcgaaaaaca	acatgctaca	agggccctgc	cgccgcctcc	540
tggggcgaacct	ctgcgccccg	gaacaacgg	aaacgcgaaa	cgcaaaacgccc	ttcttctct	600
tcttcatggc	cgtcgaaac	gtcctgggct	acgcccgggg	ctcttacagc	ggcctccacaca	660
acgtcttccc	tttcactaaa	acaaaagcat	gtgatgttta	ctgcgcgaat	ttgaagagtt	720
gtttcttcct	ctccatcgcg	cttcttctca	ctctctccac	aatcgccctt	acctacgtga	780
aggagaaaaac	ggtgtcgta	gagaaaaacgg	tgaggagttc	ggtgaggag	gtgggtcc	840
acgggggcat	gccgtgtttc	gggcaattat	tccgtgcgtt	ccgcgaactg	aagcgtccca	900
tgtggatcct	tctgttggtg	acgtgtctga	actgggatttg	cctgggtcct	tttttgcstat	960
tcgacaccga	ctgggattgg	ggcgtgaggt	gtacggaggg	aaaatnnggg	gaaaggaaag	1020
ggtacgataa	ggggttccgt	t				1041

<210> 14  
<211> 322  
<212> PRT  
<213> Glycine max

<220>  
<221> UNSURE  
<222> (311)

<220>  
<221> UNSURE  
<222> (321)

<400> 14  
Met Glu Pro Leu Ser Ser Thr Lys His Asn Asn Asn Leu Ser Lys Pro  
1 5 10 15

Ser Ser Leu His Thr Glu Ala Pro Pro Pro Glu Ala Ser Pro Leu Arg  
20 25 30

Lys Ile Met Val Val Ala Ser Ile Ala Ala Gly Val Gln Phe Gly Trp  
35 40 45

Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln Leu Leu Gly Ile  
50 55 60

Pro His Thr Trp Ala Ala Phe Ile Trp Leu Cys Gly Pro Ile Ser Gly  
 65 70 75 80  
 Met Leu Val Gln Pro Ile Val Gly Tyr His Ser Asp Arg Cys Thr Ser  
 85 90 95  
 Arg Phe Gly Arg Arg Arg Pro Phe Ile Ala Ala Gly Ser Leu Ala Val  
 100 105 110  
 Ala Ile Ala Val Phe Leu Ile Gly Tyr Ala Ala Asp Leu Gly His Met  
 115 120 125  
 Phe Gly Asp Ser Leu Ala Lys Lys Thr Ala Pro Arg His Arg Ile Phe  
 130 135 140  
 Val Val Gly Phe Trp Ile Leu Asp Val Ala Asn Asn Met Leu Gln Gly  
 145 150 155 160  
 Pro Cys Arg Ala Leu Leu Gly Asp Leu Cys Ala Gly Glu Gln Arg Lys  
 165 170 175  
 Thr Arg Asn Ala Asn Ala Phe Phe Ser Phe Phe Met Ala Val Gly Asn  
 180 185 190  
 Val Leu Gly Tyr Ala Ala Gly Ser Tyr Ser Gly Leu His Asn Val Phe  
 195 200 205  
 Pro Phe Thr Lys Thr Lys Ala Cys Asp Val Tyr Cys Ala Asn Leu Lys  
 210 215 220  
 Ser Cys Phe Phe Leu Ser Ile Ala Leu Leu Leu Thr Leu Ser Thr Ile  
 225 230 235 240  
 Ala Leu Thr Tyr Val Lys Glu Lys Thr Val Ser Ser Glu Lys Thr Val  
 245 250 255  
 Arg Ser Ser Val Glu Glu Asp Gly Ser His Gly Gly Met Pro Cys Phe  
 260 265 270  
 Gly Gln Leu Phe Gly Ala Phe Arg Glu Leu Lys Arg Pro Met Trp Ile  
 275 280 285  
 Leu Leu Leu Val Thr Cys Leu Asn Trp Asp Cys Leu Val Pro Phe Leu  
 290 295 300  
 Leu Phe Asp Thr Asp Trp Xaa Gly Arg Glu Val Tyr Gly Gly Lys Ile  
 305 310 315 320  
 Xaa Gly

<210> 15  
 <211> 578  
 <212> DNA  
 <213> Vernonia mespilifolia

<400> 15  
 gcacgagggtt ggcttggcgg tgtgaaacgg ttatgggtg gcatcaattt ctttctagct 60  
 gtttgttgg ccatgacggt ggtggtgacc aaaatggcag actctgaacg acagtttaag 120  
 acgttgcccg acggttagcaa aaccgcgttg ccaccaggcg ggcacattaa agccggtgct 180  
 ttgtcaattt ttgccgtcct cggtgcccca ctagctgtga ctttcagtgt tccatgtgct 240

cttgcataa tattttctaa cagttcagga gctggacaag gtctatcaact tggtgttttg 300  
aatctagcaa tcgtcataacc acagatgttc gtatcagtagc taagtggacc atgggacgca 360  
ctgttcggcg gtggaaactt accagcattt gtggttggag caatttcggc tgcagtaagt 420  
gggatattat cgttcaccaat gcttccttcg ccaccccccag atgtcgtact ttcaaaggtt 480  
tccggaggtg ggtatgcattt aagatgtttt aactgccactt caacacgtcc cgattgtgtc 540  
agattgggac atttaggacc aaaaaaaaaaaaaaaa 578

<210> 16

<211> 166

<212> PRT

<213> Vernonia mespilifolia

<400> 16

Ala	Arg	Gly	Trp	Leu	Gly	Gly	Val	Lys	Arg	Leu	Trp	Gly	Gly	Ile	Asn
1				5				10						15	

Phe	Leu	Leu	Ala	Val	Cys	Leu	Ala	Met	Thr	Val	Val	Val	Thr	Lys	Met
				20					25				30		

Ala	Asp	Ser	Glu	Arg	Gln	Phe	Lys	Thr	Leu	Pro	Asp	Gly	Ser	Lys	Thr
					35			40					45		

Ala	Leu	Pro	Pro	Gly	Gly	Asp	Ile	Lys	Ala	Gly	Ala	Leu	Ser	Ile	Phe
					50		55				60				

Ala	Val	Leu	Gly	Ala	Pro	Leu	Ala	Val	Thr	Phe	Ser	Val	Pro	Cys	Ala
	65					70			75				80		

Leu	Ala	Ser	Ile	Phe	Ser	Asn	Ser	Ser	Gly	Ala	Gly	Gln	Gly	Leu	Ser
			85					90					95		

Leu	Gly	Val	Leu	Asn	Leu	Ala	Ile	Val	Ile	Pro	Gln	Met	Phe	Val	Ser
					100			105				110			

Val	Leu	Ser	Gly	Pro	Trp	Asp	Ala	Leu	Phe	Gly	Gly	Asn	Leu	Pro
				115				120				125		

Ala	Phe	Val	Val	Gly	Ala	Ile	Ser	Ala	Ala	Val	Ser	Gly	Ile	Leu	Ser
					130		135				140				

Phe	Thr	Met	Leu	Pro	Ser	Pro	Pro	Pro	Asp	Val	Val	Leu	Ser	Lys	Val
		145			150				155				160		

Ser Gly Gly Met His  
165

<210> 17

<211> 1062

<212> DNA

<213> Triticum aestivum

<400> 17

ctgaaatgcc	gtcagtgc	ctcg	tacccg	gcct	cacctg	gctgt	cctgg	ttccc	c	60	
tcc	tgtacga	cacc	ggactgg	atgg	gtcg	agat	ctacca	cggt	gacccc	120	
ccg	acgaggc	caac	gcgtt	cagg	cagg	tcag	ggccgg	ggc	gttcggc	180	
act	cggtc	cct	gggtt	tc	agtc	gttcc	tgat	cgag	ctgt	caag	240
cg	cggtt	gtgg	gtgt	ca	agca	actt	cc	gtc	atgc	ggcc	300
tc	ataag	ctg	gggg	cact	cagg	ac	cc	at	cc	at	360
gca	aggag	caag	atcg	tc	cc	cct	tc	cg	cc	at	420
tt	ctgt	ac	tg	cc	gg	cc	tc	gg	cc	tc	480
aagg	gtgt	cac	gggc	gt	cg	ca	cc	gg	ac	cg	540

tgggggcggg gccgtggac gagctgtcg gcaaggcaa catcccgcg ttcggcg 600  
cgtccgcctt cgcgctcatt cgcggcatcg tcggcataatt cctgctgcc aagatctcca 660  
ggcgcctt cggggccgtc agcggccgcg gtcactgacc gcgcgcgcg ccggtcggcc 720  
tgagcatggc gaaggccgat cgcgcggcc cgaaggccc agccagctc ggcatttacc 780  
aaatttcgc ataggcgtaa ctaggggct ctcgcctaag gactccgtag agcagaataa 840  
gaattgtgag gaacctgtat gtgttgtgtc tgtatgtgcg tctaagtca gtcgtgttagc 900  
ggaaaatgga cagaggaatg cggcatcca tcgcccggctg gggtgtcgcc tttgggtgt 960  
gacttgcgtg tagcaaacc aagtgatcaa gtgaggggaa aagaatggat gatgaactt 1020  
cagcgacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1062

<210> 18  
<211> 232  
<212> PRT  
<213> Triticum aestivum

<400> 18  
Ala Gly Met Pro Ser Val Leu Leu Val Thr Gly Leu Thr Trp Leu Ser  
1 5 10 15  
Trp Phe Pro Phe Ile Leu Tyr Asp Thr Asp Trp Met Gly Arg Glu Ile  
20 25 30  
Tyr His Gly Asp Pro Lys Gly Thr Pro Asp Glu Ala Asn Ala Phe Gln  
35 40 45  
Ala Gly Val Arg Ala Gly Ala Phe Gly Leu Leu Leu Asn Ser Val Val  
50 55 60  
Leu Gly Phe Ser Ser Phe Leu Ile Glu Pro Leu Cys Lys Arg Leu Gly  
65 70 75 80  
Pro Arg Val Val Trp Val Ser Ser Asn Phe Leu Val Cys Ile Ser Met  
85 90 95  
Ala Ala Ile Cys Ile Ile Ser Trp Trp Ala Thr Gln Asp Leu His Gly  
100 105 110  
Tyr Ile Gln His Ala Ile Thr Ala Ser Lys Glu Ile Lys Ile Val Ser  
115 120 125  
Leu Ala Leu Phe Ala Phe Leu Gly Ile Pro Leu Ala Ile Leu Tyr Ser  
130 135 140  
Val Pro Phe Ala Val Thr Ala Gln Leu Ala Ala Asn Arg Gly Gly  
145 150 155 160  
Gln Gly Leu Cys Thr Gly Val Leu Asn Ile Ala Ile Val Ile Pro Gln  
165 170 175  
Val Ile Ile Ala Val Gly Ala Gly Pro Trp Asp Glu Leu Phe Gly Lys  
180 185 190  
Gly Asn Ile Pro Ala Phe Gly Val Ala Ser Ala Phe Ala Leu Ile Gly  
195 200 205  
Gly Ile Val Gly Ile Phe Leu Leu Pro Lys Ile Ser Arg Arg Gln Phe  
210 215 220  
Arg Ala Val Ser Gly Gly His  
225 230

<210> 19  
<211> 2083  
<212> DNA  
<213> Triticum aestivum

<220>  
<221> UNSURE  
<222> (1093)

<400> 19  
gcacgagcac accacaccac acctctctct ctctcactcg cacttccgc ttcgtctcc 60  
tcctcttctt cctcccgtaa gacccttctt ccccgccgtt gatccgatca acgtcctctt 120  
ccgtccgtcc cctagatctt tggccggca gggatacggc gtagaattga taggcgaacg 180  
gacgagggtgg ttagatcgccag ggcggctct ctgccatggc ggcggccggaa ggcaacggcg 240  
aggtggagct ctccgtcggg gtcggccggc gaggccggcgg cggccggcggc gggggggagc 300  
aaccggccgt ggacatcagc ctccggcagac tcatcctcgc cggcatggc gccggccggc 360  
tgcgtacgg atggcgctc cagctctccc tgctcacccc ctacgtccag actctggac 420  
tttcgcatgc tctgacttca ttcatgtggc tctcgccccc tattgtggta ttatgtggttc 480  
aaccatgcgt tgggctctac agtacaatg gcacatctag atggggaaaga cgcagaccgt 540  
ttattctgac aggtatgcattt ctcatctgca ttgtctttt ggtcgccggc ttctcggtc 600  
acattggagc tggctctgggt gacagaaagg aagagtgcag ttcgttccat gggccctcggt 660  
ggcacgctgc aattgtgtat gttctggat tctggctctc tgacttctcc aacaacactg 720  
tgcaagggtcc agcgctgtc ctgatggctg atttatcagc tcagcatggc cccagtgcag 780  
caaattcaat ctctgttct tggatggcgc tagggaaat cttggatac ttctctgtt 840  
ccacaaacaa ctggcacaag tggttccgt tccctccggac aagggttgc tggtaaggct 900  
gcccacaaatct gaaaggcgca tttctgggtt cagtgtgtt cctggccccc tgggggttga 960  
taactgtgtat ctgcgcctaa gagataccgt acaaggccgt tgcgcctcc ccaacaaagg 1020  
gcaatggcca ggttgaagtc gagccaccgg ggcggctcgc cgttcaaa ggcttcaaga 1080  
acttgcctcc tgnaatggcc tgggtgtcc ttcgtactgg ctcacactgg ctgttctgtt 1140  
tccccttcat ctgttacgac accgacttgg tgggtgttca gatctaccac ggtgaccctt 1200  
agggaacccc cgacgaggccc aacgcgttcc aggccggat caggccggg gcttgcggcc 1260  
tgctactcaa ctccgtcgcc ctgggttca gtcgttccct gatcgagccg ctgttcaaga 1320  
ggcttagggcc gccccgggttca gcaacttctt cgttgcctc tccatggcc 1380  
cgatttgcataaagctgg tgggtgttcc accgacttggc tgggtatcc cagcacggcc 1440  
tcaccggccat caaggagatc aagatcttcc ccctcgccctt cttcgccccc ttcggatcc 1500  
ctctcgccat tctgtacatgt gtcgttccctt cgggtacggc gcagctggcc gcaagagag 1560  
gccccggccat cgggtgttcc accgacttggc tgggtgttcc tcaacatccg catcgatggc 1620  
tcatcgccgt gggggccgggg ccgtggacg agctgttccg caaggccaa atcccggtt 1680  
tcggcatggc ctccgccttc ggcgttccatcg gcccgttccatcg cggcatattt ctgttgc 1740  
agatctccat cggccgttcc cggccgttcc gcccggccgg tcaacttggc tggccaaagg 1800  
cgagggtccc agggccgttcc accgacttggc tgggtgttcc tcaacatccg catcgatggc 1860  
ctcgccttaag gactccgttcc accgacttggc tgggtgttcc tcaacttggc tgggtgttcc 1920  
tgtatgttccat tgggtgttcc tttgggttcc tcaacttggc tgggtgttcc tggccatcc 1980  
tcaccggccat ggggtgttcc tttgggttcc tcaacttggc tgggtgttcc tggccatcc 2040  
gtgagggggaa atgaatggat gatgaactt cagcgacaaa aaa 2083

<210> 20  
<211> 522  
<212> PRT  
<213> Triticum aestivum

<400> 20  
Met Ala Arg Gly Gly Gly Asn Gly Glu Val Glu Leu Ser Val Gly Val  
1 5 10 15

Gly Gly Gly Gly Gly Ala Ala Gly Gly Glu Gln Pro Ala Val  
20 25 30

Asp Ile Ser Leu Gly Arg Leu Ile Leu Ala Gly Met Val Ala Gly Gly  
35 40 45

Val Gln Tyr Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val  
50 55 60

Gln Thr Leu Gly Leu Ser His Ala Leu Thr Ser Phe Met Trp Leu Cys  
65 70 75 80

Gly Pro Ile Ala Gly Leu Val Val Gln Pro Cys Val Gly Leu Tyr Ser  
85 90 95

Asp Lys Cys Thr Ser Arg Trp Gly Arg Arg Arg Pro Phe Ile Leu Thr  
100 105 110

Gly Cys Ile Leu Ile Cys Ile Ala Val Val Val Val Gly Phe Ser Ala  
115 120 125

Asp Ile Gly Ala Gly Leu Gly Asp Ser Lys Glu Glu Cys Ser Leu Tyr  
130 135 140

His Gly Pro Arg Trp His Ala Ala Ile Val Tyr Val Leu Gly Phe Trp  
145 150 155 160

Leu Leu Asp Phe Ser Asn Asn Thr Val Gln Gly Pro Ala Arg Ala Leu  
165 170 175

Met Ala Asp Leu Ser Ala Gln His Gly Pro Ser Ala Ala Asn Ser Ile  
180 185 190

Phe Cys Ser Trp Met Ala Leu Gly Asn Ile Leu Gly Tyr Ser Ser Gly  
195 200 205

Ser Thr Asn Asn Trp His Lys Trp Phe Pro Phe Leu Arg Thr Arg Ala  
210 215 220

Cys Cys Glu Ala Cys Ala Asn Leu Lys Gly Ala Phe Leu Val Ala Val  
225 230 235 240

Leu Val Leu Ala Phe Cys Leu Val Ile Thr Val Ile Phe Ala Lys Glu  
245 250 255

Ile Pro Tyr Lys Ala Ile Ala Pro Leu Pro Thr Lys Gly Asn Gly Gln  
260 265 270

Val Glu Val Glu Pro Thr Gly Pro Leu Ala Val Phe Lys Gly Phe Lys  
275 280 285

Asn Leu Pro Pro Met Pro Ser Val Leu Leu Val Thr Gly Leu Thr Trp  
290 295 300

Leu Ser Trp Phe Pro Phe Ile Leu Tyr Asp Thr Asp Trp Met Gly Arg  
305 310 315 320

Glu Ile Tyr His Gly Asp Pro Lys Gly Thr Pro Asp Glu Ala Asn Ala  
325 330 335

Phe Gln Ala Gly Val Arg Ala Gly Ala Phe Gly Leu Leu Leu Asn Ser  
340 345 350

Val Val Leu Gly Phe Ser Ser Phe Leu Ile Glu Pro Leu Cys Lys Arg  
355 360 365

Leu Gly Pro Arg Val Val Trp Val Ser Ser Asn Phe Leu Val Cys Leu  
370 375 380

Ser Met Ala Ala Ile Cys Ile Ile Ser Trp Trp Ala Thr Gln Asp Leu  
385 390 395 400

His Gly Tyr Ile Gln His Ala Ile Thr Ala Ser Lys Glu Ile Lys Ile  
405 410 415

Val Ser Leu Ala Leu Phe Ala Phe Leu Gly Ile Pro Leu Ala Ile Leu  
420 425 430

Tyr Ser Val Pro Phe Ala Val Thr Ala Gln Leu Ala Ala Lys Arg Gly  
435 440 445

Gly Gly Gln Gly Leu Cys Thr Gly Val Leu Asn Ile Ala Ile Val Ile  
450 455 460

Pro Gln Val Ile Ile Ala Val Gly Ala Gly Pro Trp Asp Glu Leu Phe  
465 470 475 480

Gly Lys Gly Asn Ile Pro Ala Phe Gly Met Ala Ser Ala Phe Ala Leu  
485 490 495

Ile Gly Gly Ile Val Gly Ile Phe Leu Leu Pro Lys Ile Ser Arg Arg  
500 505 510

Gln Phe Arg Ala Val Ser Gly Gly Gly His  
515 520

<210> 21

<211> 2160

<212> DNA

<213> Triticum aestivum

<400> 21

gcacgagacc acccctctct ctctctctca ctcgcgcttt ccgcctctcg tctccctct 60  
tctcccccgtcagccctc tttccccgg cggtgatccg atcgacgtcc tccctccctcc 120  
ccggcggtga tccgacgcgc cgttagatgg ataggcgaac gaacggggcg gtgatcgcc 180  
gggcggcccc cctgcgcacga tggcgccgg cggcggcaac ggcgagggtgg agctctcggt 240  
gggggtcgcc ggaggcgccg cggccgcggg cggggcgac gccccggcg tggacatcg 300  
cctcgccagg ctcatcctcg cggcgtatggt cggccggcggt gtgcagatcg gatgggcgt 360  
ccagctctcc ctgtcaccc cctacgtcca gactctggga ctttcgatcg ctctgacttc 420  
attcatgtgg ctctgcggcc sttattgtgg attatgtggt caaccatcg ttgggctcta 480  
cagtgcacaaatg tgcacttcaa gatggggaaatg acgcagaccc ttcattctga caggatgtat 540  
cctcatctgc attgtgtcg tggcgtcggtt cttctcggtt gacattggatgt ctgtctggg 600  
tgacagcaag gaagagtgcgtc gtctctatca tgggcctcg tggcacgtcg caattgtgt 660  
tggatggc ttctggctcc ttgacttctc caacaacaca gtgcacggac cagcgcgtgc 720  
tctgatggctt gatttatcg cccagcatgg acccagtgcac gcaatttcaa tcttctgttc 780  
ttggatggca ctggggaaata tcctaggata ctcatctgtt tccacaaata actggcacaa 840  
gtggttccg ttctccggaa caagggttg ctgtgaaggcc tgcgcacatcg tggaaaggcg 900  
atttctgggt gcaatgtgtt tcctggccctt ctgtttgggtt ataaaccgtga tcttcgcacaa 960  
ggagataccg tacaaggcgat ttgcggccctt cccaaacaaatg gccaatggcc aggttgaatgt 1020  
cgagccacc gggccgctcg ccgttctcaaa aggcttcaatg aacttgcctc ctggaaatgcc 1080  
gtcagtgttc ctcgtcaccc gcctcacctg gctgtccctgg ttcccttca tcctgtacgt 1140  
caccgactgg atgggtcgatg agatcttacca cggtgacccccc aagggaaatccc ccgacgaggc 1200  
caacgcgttc caggcagggtt tcaggccgg ggcgttgcgc ctgtactca actcggtcg 1260  
cctgggggttc agtcgttcc tggatcgatcg gctgtgcacatg aggcttagggcc cgggggtgg 1320  
gtgggtgtca agcaacttcc tcgtctgcctt ctccatggcc gccatttgca tcataagctg 1380  
gtggggccactt caggacacttgc atgggtacat ccagcacccc atcaccgcca gcaaggagat 1440  
caagatcgatc tccctcgccc ttttcgcctt cctcgaaatc cctctcgccca ttctgtacat 1500

tgtcacttgc gccgtgacgg cgcaagctggc ggcgaacaga tgcgggtggc aatggctgtg 1560  
cacgggcgtg ctgaacatcg ccatacgat accccaggtg atcatcgat tgggggcggg 1620  
gcccgtggac gagctgttcg gcaaggcggaa catcccgccg ttcggcgtgg cgtccgcctt 1680  
cgccgtcatc ggcggcatcg tcggcatatt cctgtgtccc aagatctcca ggctccagg 1740  
ccggggcgatc agcggcgccg gtcactgacc ggcggccggc ccggcggcc tgagcatggc 1800  
gaaggccgtat cggccggcc cgaagggtccc agcccaagcgtt ggcatttacc aaattttcg 1860  
ataggcgtaa cttagggggct ctcgcctaag gactccgtag agcagaataa gaattgtgag 1920  
gaacctgtat gtgttgtgtc tgtatgtcg tggtaatgtcg tgcgtgtgc ggaaaatgg 1980  
cagaggaatg cggccatcca tcgcccgtc ggggtgtcg tttgggtgt gacttgtgt 2040  
tagcaaacca aggtgatcaa gtgaggggaa aagaatggat gatgaactt cagcgacaaa 2100  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa taaaaaaaaaa 2160

<210> 22

<211> 522

<212> PRT

<213> Triticum aestivum

<400> 22

Met Ala Arg Gly Gly Gly Asn Gly Glu Val Leu Ser Val Gly Val  
1 5 10 15

Gly Gly Gly Gly Ala Gly Ala Gly Gly Ala Asp Ala Pro Ala Val Asp  
20 25 30

Ile Ser Leu Gly Arg Leu Ile Leu Ala Gly Met Val Ala Gly Gly Val  
35 40 45

Gln Tyr Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln  
50 55 60

Thr Leu Gly Leu Ser His Ala Leu Thr Ser Phe Met Trp Leu Cys Gly  
65 70 75 80

Pro Ile Ala Gly Leu Val Val Gln Pro Cys Val Gly Leu Tyr Ser Asp  
85 90 95

Lys Cys Thr Ser Arg Trp Gly Arg Arg Arg Pro Phe Ile Leu Thr Gly  
100 105 110

Cys Ile Leu Ile Cys Ile Ala Val Val Val Val Gly Phe Ser Ala Asp  
115 120 125

Ile Gly Ala Ala Leu Gly Asp Ser Lys Glu Glu Cys Ser Leu Tyr His  
130 135 140

Gly Pro Arg Trp His Ala Ala Ile Val Tyr Val Leu Gly Phe Trp Leu  
145 150 155 160

Leu Asp Phe Ser Asn Asn Thr Val Gln Gly Pro Ala Arg Ala Leu Met  
165 170 175

Ala Asp Leu Ser Ala Gln His Gly Pro Ser Ala Ala Asn Ser Ile Phe  
180 185 190

Cys Ser Trp Met Ala Leu Gly Asn Ile Leu Gly Tyr Ser Ser Gly Ser  
195 200 205

Thr Asn Asn Trp His Lys Trp Phe Pro Phe Leu Arg Thr Arg Ala Cys  
210 215 220

Cys Glu Ala Cys Ala Asn Leu Lys Gly Ala Phe Leu Val Ala Val Leu

225	230	235	240
Phe Leu Ala Phe Cys Leu Val Ile Thr Val Ile Phe Ala Lys Glu Ile			
245	250	255	
Pro Tyr Lys Ala Ile Ala Pro Leu Pro Thr Lys Ala Asn Gly Gln Val			
260	265	270	
Glu Val Glu Pro Thr Gly Pro Leu Ala Val Phe Lys Gly Phe Lys Asn			
275	280	285	
Leu Pro Pro Gly Met Pro Ser Val Leu Leu Val Thr Gly Leu Thr Trp			
290	295	300	
Leu Ser Trp Phe Pro Phe Ile Leu Tyr Asp Thr Asp Trp Met Gly Arg			
305	310	315	320
Glu Ile Tyr His Gly Asp Pro Lys Gly Thr Pro Asp Glu Ala Asn Ala			
325	330	335	
Phe Gln Ala Gly Val Arg Ala Gly Ala Phe Gly Leu Leu Asn Ser			
340	345	350	
Val Val Leu Gly Phe Ser Ser Phe Leu Ile Glu Pro Leu Cys Lys Arg			
355	360	365	
Leu Gly Pro Arg Val Val Trp Val Ser Ser Asn Phe Leu Val Cys Leu			
370	375	380	
Ser Met Ala Ala Ile Cys Ile Ile Ser Trp Trp Ala Thr Gln Asp Leu			
385	390	395	400
His Gly Tyr Ile Gln His Ala Ile Thr Ala Ser Lys Glu Ile Lys Ile			
405	410	415	
Val Ser Leu Ala Leu Phe Ala Phe Leu Gly Ile Pro Leu Ala Ile Leu			
420	425	430	
Tyr Ser Val Thr Phe Ala Val Thr Ala Gln Leu Ala Ala Asn Arg Cys			
435	440	445	
Gly Gly Gln Trp Leu Cys Thr Gly Val Leu Asn Ile Ala Ile Ala Ile			
450	455	460	
Pro Gln Val Ile Ile Ala Leu Gly Ala Gly Pro Trp Asp Glu Leu Phe			
465	470	475	480
Gly Lys Gly Asn Ile Pro Ala Phe Gly Val Ala Ser Ala Phe Ala Leu			
485	490	495	
Ile Gly Gly Ile Val Gly Ile Phe Leu Leu Pro Lys Ile Ser Arg Leu			
500	505	510	
Gln Phe Arg Ala Val Ser Gly Gly His			
515	520		

<210> 23  
<211> 2030  
<212> DNA  
<213> Triticum aestivum

<400> 23

cggaagcgac	gccgcgcggc	ccaaggagga	acagggcagc	ggcgcgggg	cgggggaagg	60
cggcatgaag	ggcgcgccca	agtggcggt	ggtgtggcc	tgcattggcg	ccgcccggcgt	120
gcagttcggc	tggcgctcc	agctctccct	cctcaccccc	tacatccaga	ctcttaggaat	180
agaccatgcc	atggcgctat	tcatttggct	ttgcgggccc	attactggtt	ttgtggttca	240
accgtgtgtt	ggtgtctgga	gtgacaagtg	cgcgtccaa	tacgggagga	gacggccgtt	300
cattttggct	ggatgcgtgc	tgatttgc	agctgttaact	tttagtgcgggt	tttctgcaga	360
ccttgcgtac	atgttaggag	acaccactga	gcactgcagt	acatacaaag	gtctacgata	420
tcgagctgct	tttattttca	tttttggatt	ctggatgcgt	gacccgttca	ataatacagt	480
tcaaggaccc	gctcgtgccc	tcctagctga	tcttcaggt	cccgatcaat	gtaattccgc	540
aatatcaata	ttctgtctat	ggatggctgt	ttggaaacgtt	cttggttttt	cagctgggtc	600
gagtggaaat	tggcacaagt	ggtttccctt	tctgtatgact	agggcctgtt	gtgaagcttg	660
tggtaatttg	aaagcagctt	tcttgattgc	agttgtatcc	cttctgtttt	gcatggctgt	720
taccctctac	tttgctgaag	agattccact	gaaaccaaa	gatgcacagc	agttatctga	780
ctcggctcct	ctactgaacg	gttctagaga	tgatcatgat	gcttcagtg	aacagactaa	840
tggaggactt	totaacggtc	atgctgtatgc	aaaccatgtc	tcagctact	ccagtgcaga	900
tgcagggttcc	aactcgaaca	aggacatgt	tgaggcttc	aatgatggac	caggagcagt	960
tttggtaaaa	attttgacta	gcatgaggca	tctacccct	ggaatgtatt	ccgtgcttct	1020
ggttatggcc	ctaacatggc	tgtcggtt	tcccttttc	cttttgaca	ccgactgtat	1080
ggggcgtgag	gtttatcag	gtgacccaaa	aggaaacgcg	agtggaaagga	aagcttatga	1140
tgtatgggtc	cgagaagggt	cattttgtt	gctatttgaat	tcagtcgtcc	ttgggatgg	1200
ctctttccct	atcgatccat	tatgcggat	gattgggtca	agatggttt	gggcaatcag	1260
caacttcata	gtgtttgcct	gcatgttggc	tacaacaata	ctaagtttga	tctcctatga	1320
cctgtactcg	agcaagcttc	aacatattgt	cgggggcagat	aaaacagtca	agacctcagc	1380
gcttatttctt	ttctctcttc	tcggatttgc	actctcgatc	acttatagtt	ttccgttctc	1440
cgtgactgct	gagctgactg	ccggacacagg	aggcggacaa	ggttggctt	ctggagttct	1500
gaatcttgc	atcgtcgttc	ctcagatagt	agtgtcactc	ggagcaggcc	catgggacaa	1560
gctcttgggg	ggaggggaaacg	tcccgcttt	cgccctggcc	tcggcttct	cgctagcagc	1620
cgaggtgtc	gccccgtatca	agctgccc	gttgcgaac	aattaccaat	ccgcccggctt	1680
ccacatggc	tgaaccctaa	agcccaagc	cagctgtgt	gtgttacatc	cagatgttta	1740
gtaccaatcc	gcccgtttcc	atattaat	tgcgttat	ggagatgatt	ctttttctcc	1800
tcttgcata	tacacagtta	ataagactac	agatcgat	gactaggata	aagagataat	1860
ttttaggcct	gtgtgcatac	aagtgtcgat	gagaagttgt	aaaacatgtt	cactgtttt	1920
ttgtactgtt	tatgttagtga	aatttcatag	atggccggat	gtgttctgtt	ccgataaaaa	1980
aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	2030

<210> 24

<211> 563

<212> PRT

<213> Triticum aestivum

<400> 24

Gly	Ser	Asp	Ala	Ala	Arg	Pro	Lys	Glu	Glu	Gln	Gly	Ser	Gly	Ala	Gly	
1																15

Ala	Gly	Glu	Gly	Gly	Met	Lys	Gly	Ala	Pro	Lys	Trp	Arg	Val	Val	Leu
					20					25					30

Ala	Cys	Met	Val	Ala	Ala	Gly	Val	Gln	Phe	Gly	Trp	Ala	Leu	Gln	Leu
							35						45		

Ser	Leu	Leu	Thr	Pro	Tyr	Ile	Gln	Thr	Leu	Gly	Ile	Asp	His	Ala	Met
						50					55				60

Ala	Ser	Phe	Ile	Trp	Leu	Cys	Gly	Pro	Ile	Thr	Gly	Phe	Val	Val	Gln
						65				70			75		80

Pro	Cys	Val	Gly	Val	Trp	Ser	Asp	Lys	Cys	Arg	Ser	Lys	Tyr	Gly	Arg
									85			90		95	

Arg Arg Pro Phe Ile Leu Ala Gly Cys Val Leu Ile Cys Ala Ala Val

	100	105	110												
Thr	Leu	Val	Gly	Phe	Ser	Ala	Asp	Leu	Gly	Tyr	Met	Leu	Gly	Asp	Thr
	115							120				125			
Thr	Glu	His	Cys	Ser	Thr	Tyr	Lys	Gly	Leu	Arg	Tyr	Arg	Ala	Ala	Phe
	130				135					140					
Ile	Phe	Ile	Phe	Gly	Phe	Trp	Met	Leu	Asp	Leu	Ala	Asn	Asn	Thr	Val
	145				150				155				160		
Gln	Gly	Pro	Ala	Arg	Ala	Leu	Leu	Ala	Asp	Leu	Ser	Gly	Pro	Asp	Gln
	165							170				175			
Cys	Asn	Ser	Ala	Asn	Ala	Ile	Phe	Cys	Ser	Trp	Met	Ala	Val	Gly	Asn
	180					185						190			
Val	Leu	Gly	Phe	Ser	Ala	Gly	Ala	Ser	Gly	Asn	Trp	His	Lys	Trp	Phe
	195					200					205				
Pro	Phe	Leu	Met	Thr	Arg	Ala	Cys	Cys	Glu	Ala	Cys	Gly	Asn	Leu	Lys
	210				215					220					
Ala	Ala	Phe	Leu	Ile	Ala	Val	Val	Phe	Leu	Leu	Phe	Cys	Met	Ala	Val
	225					230				235			240		
Thr	Leu	Tyr	Phe	Ala	Glu	Glu	Ile	Pro	Leu	Glu	Pro	Lys	Asp	Ala	Gln
	245					250					255				
Gln	Leu	Ser	Asp	Ser	Ala	Pro	Leu	Leu	Asn	Gly	Ser	Arg	Asp	Asp	His
	260					265					270				
Asp	Ala	Ser	Ser	Glu	Gln	Thr	Asn	Gly	Gly	Leu	Ser	Asn	Gly	His	Ala
	275					280					285				
Asp	Ala	Asn	His	Val	Ser	Ala	Asn	Ser	Ser	Ala	Asp	Ala	Gly	Ser	Asn
	290				295					300					
Ser	Asn	Lys	Asp	Asp	Val	Glu	Ala	Phe	Asn	Asp	Gly	Pro	Gly	Ala	Val
	305					310				315			320		
Leu	Val	Lys	Ile	Leu	Thr	Ser	Met	Arg	His	Leu	Pro	Pro	Gly	Met	Tyr
	325					330					335				
Ser	Val	Leu	Leu	Val	Met	Ala	Leu	Thr	Trp	Leu	Ser	Trp	Phe	Pro	Phe
	340					345					350				
Phe	Leu	Phe	Asp	Thr	Asp	Trp	Met	Gly	Arg	Glu	Val	Tyr	His	Gly	Asp
	355					360					365				
Pro	Lys	Gly	Asn	Ala	Ser	Glu	Arg	Lys	Ala	Tyr	Asp	Asp	Gly	Val	Arg
	370					375					380				
Glu	Gly	Ala	Phe	Gly	Leu	Leu	Leu	Asn	Ser	Val	Val	Leu	Gly	Ile	Gly
	385					390				395			400		
Ser	Phe	Leu	Ile	Asp	Pro	Leu	Cys	Arg	Met	Ile	Gly	Ala	Arg	Leu	Val
	405					410					415				
Trp	Ala	Ile	Ser	Asn	Phe	Ile	Val	Phe	Ala	Cys	Met	Leu	Ala	Thr	Thr
	420					425					430				

Ile Leu Ser Trp Ile Ser Tyr Asp Leu Tyr Ser Ser Lys Leu Gln His  
435 440 445

Ile Val Gly Ala Asp Lys Thr Val Lys Thr Ser Ala Leu Ile Leu Phe  
450 455 460

Ser Leu Leu Gly Leu Pro Leu Ser Ile Thr Tyr Ser Val Pro Phe Ser  
465 470 475 480

Val Thr Ala Glu Leu Thr Ala Gly Thr Gly Gly Gln Gly Leu Ala  
485 490 495

Thr Gly Val Leu Asn Leu Ala Ile Val Ala Pro Gln Ile Val Val Ser  
500 505 510

Leu Gly Ala Gly Pro Trp Asp Lys Leu Leu Gly Gly Asn Val Pro  
515 520 525

Ala Phe Ala Leu Ala Ser Val Phe Ser Leu Ala Ala Gly Val Leu Ala  
530 535 540

Val Ile Lys Leu Pro Lys Leu Ser Asn Asn Tyr Gln Ser Ala Gly Phe  
545 550 555 560

His Met Gly

<210> 25  
<211> 501  
<212> PRT  
<213> Daucus carota

<400> 25  
Met Ala Gly Pro Glu Ala Asp Arg Asn Arg His Arg Gly Gly Ala Thr  
1 5 10 15

Ala Ala Pro Pro Pro Arg Ser Arg Val Ser Leu Arg Leu Leu Arg  
20 25 30

Val Ala Ser Val Ala Cys Gly Ile Gln Phe Gly Trp Ala Leu Gln Leu  
35 40 45

Ser Leu Leu Thr Pro Tyr Val Gln Glu Leu Gly Ile Pro His Ala Trp  
50 55 60

Ser Ser Ile Ile Trp Leu Cys Gly Pro Leu Ser Gly Leu Leu Val Gln  
65 70 75 80

Pro Ile Val Gly His Met Ser Asp Gln Cys Thr Ser Lys Tyr Gly Arg  
85 90 95

Arg Arg Pro Phe Ile Val Ala Gly Gly Thr Ala Ile Ile Leu Ala Val  
100 105 110

Ile Ile Ile Ala His Ser Ala Asp Ile Gly Gly Leu Leu Gly Asp Thr  
115 120 125

Ala Asp Asn Lys Thr Met Ala Ile Val Ala Phe Val Ile Gly Phe Trp  
130 135 140

Ile Leu Asp Val Ala Asn Asn Met Thr Gln Gly Pro Cys Arg Ala Leu  
145 150 155 160

Leu Ala Asp Leu Thr Gly Asn Asp Ala Arg Arg Thr Arg Val Ala Asn  
165 170 175

Ala Tyr Phe Ser Leu Phe Met Ala Ile Gly Asn Val Leu Gly Tyr Ala  
180 185 190

Thr Gly Ala Tyr Ser Gly Trp Tyr Lys Val Phe Pro Phe Ser Leu Thr  
195 200 205

Ser Ser Cys Thr Ile Asn Cys Ala Asn Leu Lys Ser Ala Phe Tyr Ile  
210 215 220

Asp Ile Ile Phe Ile Ile Thr Thr Tyr Ile Ser Ile Ser Ala Ala  
225 230 235 240

Lys Glu Arg Pro Arg Ile Ser Ser Gln Asp Gly Pro Gln Phe Ser Glu  
245 250 255

Asp Gly Thr Ala Gln Ser Gly His Ile Glu Glu Ala Phe Leu Trp Glu  
260 265 270

Leu Phe Gly Thr Phe Arg Leu Leu Pro Gly Ser Val Trp Val Ile Leu  
275 280 285

Leu Val Thr Cys Leu Asn Trp Ile Gly Trp Phe Pro Phe Ile Leu Phe  
290 295 300

Asp Thr Asp Trp Met Gly Arg Glu Ile Tyr Gly Gly Glu Pro Asn Gln  
305 310 315 320

Gly Gln Ser Tyr Ser Asp Gly Val Arg Met Gly Ala Phe Gly Leu Met  
325 330 335

Met Asn Ser Val Val Leu Gly Ile Thr Ser Val Leu Met Glu Lys Leu  
340 345 350

Cys Arg Ile Trp Gly Ser Gly Phe Met Trp Gly Leu Ser Asn Ile Leu  
355 360 365

Met Thr Ile Cys Phe Phe Ala Met Leu Leu Ile Thr Phe Ile Ala Lys  
370 375 380

Asn Met Asp Tyr Gly Thr Asn Pro Pro Asn Gly Ile Val Ile Ser  
385 390 395 400

Ala Leu Ile Val Phe Ala Ile Leu Gly Ile Pro Leu Ala Ile Thr Tyr  
405 410 415

Ser Val Pro Tyr Ala Leu Val Ser Thr Arg Ile Glu Ser Leu Gly Leu  
420 425 430

Gly Gln Gly Leu Ser Met Gly Val Leu Asn Leu Ala Ile Val Val Pro  
435 440 445

Gln Val Ile Val Ser Leu Gly Ser Gly Pro Trp Asp Gln Leu Phe Gly  
450 455 460

Gly Gly Asn Ser Pro Ala Phe Val Val Ala Ala Leu Ser Ala Phe Ala

465 470 475 480

Ala Gly Leu Ile Ala Leu Ile Ala Ile Arg Arg Pro Arg Val Asp Lys  
485 490 495

Ser Arg Leu His His  
500

<210> 26  
<211> 537  
<212> PRT  
<213> Oryza sativa

<400> 26  
Met Ala Arg Gly Ser Gly Ala Gly Gly Gly Gly Gly Gly Gly Gly  
1 5 10 15

Gly Leu Glu Leu Ser Val Gly Val Gly Gly Gly Ala Arg Gly Gly  
20 25 30

Gly Gly Gly Glu Ala Ala Ala Val Glu Thr Ala Ala Pro Ile Ser  
35 40 45

Leu Gly Arg Leu Ile Leu Ser Gly Met Val Ala Gly Gly Val Gln Tyr  
50 55 60

Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln Thr Leu  
65 70 75 80

Gly Leu Ser His Ala Leu Thr Ser Phe Met Trp Leu Cys Gly Pro Ile  
85 90 95

Ala Gly Met Val Val Gln Pro Cys Val Gly Leu Tyr Ser Asp Arg Cys  
100 105 110

Thr Ser Lys Trp Gly Arg Arg Pro Tyr Ile Leu Thr Gly Cys Val  
115 120 125

Leu Ile Cys Leu Ala Val Val Ile Gly Phe Ser Ala Asp Ile Gly  
130 135 140

Tyr Ala Met Gly Asp Thr Lys Glu Asp Cys Ser Val Tyr His Gly Ser  
145 150 155 160

Arg Trp His Ala Ala Ile Val Tyr Val Leu Gly Phe Trp Leu Leu Asp  
165 170 175

Phe Ser Asn Asn Thr Val Gln Gly Pro Ala Arg Ala Leu Met Ala Asp  
180 185 190

Leu Ser Gly Arg His Gly Pro Gly Thr Ala Asn Ser Ile Phe Cys Ser  
195 200 205

Trp Met Ala Met Gly Asn Ile Leu Gly Tyr Ser Ser Gly Ser Thr Asn  
210 215 220

Asn Trp His Lys Trp Phe Pro Phe Leu Lys Thr Arg Ala Cys Cys Glu  
225 230 235 240

Ala Cys Ala Asn Leu Lys Gly Ala Phe Leu Val Ala Val Ile Phe Leu  
245 250 255

Ser Leu Cys Leu Val Ile Thr Leu Ile Phe Ala Lys Glu Val Pro Phe  
260 265 270

Lys Gly Asn Ala Ala Leu Pro Thr Lys Ser Asn Glu Pro Ala Glu Pro  
275 280 285

Glu Gly Thr Gly Pro Leu Ala Val Leu Lys Gly Phe Arg Asn Leu Pro  
290 295 300

Thr Gly Met Pro Ser Val Leu Ile Val Thr Gly Leu Thr Trp Leu Ser  
305 310 315 320

Trp Phe Pro Phe Ile Leu Tyr Asp Thr Asp Trp Met Gly Arg Glu Ile  
325 330 335

Tyr His Gly Asp Pro Lys Gly Thr Asp Pro Gln Ile Glu Ala Phe Asn  
340 345 350

Gln Gly Val Arg Ala Gly Ala Phe Gly Leu Leu Leu Asn Ser Ile Val  
355 360 365

Leu Gly Phe Ser Ser Phe Leu Ile Glu Pro Met Cys Arg Lys Val Gly  
370 375 380

Pro Arg Val Val Trp Val Thr Ser Asn Phe Leu Val Cys Ile Ala Met  
385 390 395 400

Ala Ala Thr Ala Leu Ile Ser Phe Trp Ser Leu Lys Asp Phe His Gly  
405 410 415

Thr Val Gln Lys Ala Ile Thr Ala Asp Lys Ser Ile Lys Ala Val Cys  
420 425 430

Leu Val Leu Phe Ala Phe Leu Gly Val Pro Leu Ala Val Leu Tyr Ser  
435 440 445

Val Pro Phe Ala Val Thr Ala Gln Leu Ala Ala Thr Arg Gly Gly  
450 455 460

Gln Gly Leu Cys Thr Gly Val Leu Asn Ile Ser Ile Val Ile Pro Gln  
465 470 475 480

Val Val Ile Ala Leu Gly Ala Gly Pro Trp Asp Glu Leu Phe Gly Lys  
485 490 495

Gly Asn Ile Pro Ala Phe Gly Leu Ala Ser Gly Phe Ala Leu Ile Gly  
500 505 510

Gly Val Ala Gly Ile Phe Leu Leu Pro Lys Ile Ser Lys Arg Gln Phe  
515 520 525

Trp Ser Val Ser Met Gly Gly His  
530 535

<210> 27  
<211> 533  
<212> PRT  
<213> Ricinus communis

<400> 27

Met Gln Ser Ser Thr Ser Lys Glu Asn Lys Gln Pro Pro Ser Ser Gln  
1 5 10 15

Pro His Pro Pro Pro Leu Met Val Ala Gly Ala Ala Glu Pro Asn Ser  
20 25 30

Ser Pro Leu Arg Lys Val Val Met Val Ala Ser Ile Ala Ala Gly Ile  
35 40 45

Gln Phe Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln  
50 55 60

Leu Leu Gly Ile Pro His Thr Trp Ala Ala Phe Ile Trp Leu Cys Gly  
65 70 75 80

Pro Ile Ser Gly Met Leu Val Gln Pro Ile Val Gly Tyr His Ser Asp  
85 90 95

Arg Cys Thr Ser Arg Phe Gly Arg Arg Arg Pro Phe Ile Ala Ser Gly  
100 105 110

Ala Ala Phe Val Ala Ile Ala Val Phe Leu Ile Gly Tyr Ala Ala Asp  
115 120 125

Leu Gly His Leu Ser Gly Asp Ser Leu Asp Lys Ser Pro Lys Thr Arg  
130 135 140

Ala Ile Ala Ile Phe Val Val Gly Phe Trp Ile Leu Asp Val Ala Asn  
145 150 155 160

Asn Met Leu Gln Gly Pro Cys Arg Ala Leu Leu Ala Asp Leu Ser Gly  
165 170 175

Thr Ser Gln Lys Lys Thr Arg Thr Ala Asn Ala Leu Phe Ser Phe Phe  
180 185 190

Met Ala Val Gly Asn Val Leu Gly Tyr Ala Ala Gly Ala Tyr Thr His  
195 200 205

Leu Tyr Lys Leu Phe Pro Phe Thr Lys Thr Thr Ala Cys Asp Val Tyr  
210 215 220

Cys Ala Asn Leu Lys Ser Cys Phe Phe Ile Ser Ile Val Leu Leu Leu  
225 230 235 240

Ser Leu Thr Val Leu Ala Leu Ser Tyr Val Lys Glu Lys Pro Trp Ser  
245 250 255

Pro Asp Gln Ala Val Asp Asn Ala Glu Asp Asp Thr Ala Ser Gln Ala  
260 265 270

Ser Ser Ser Ala Gln Pro Met Pro Phe Phe Gly Glu Ile Leu Gly Ala  
275 280 285

Phe Lys Asn Leu Lys Arg Pro Met Trp Ile Leu Leu Leu Val Thr Cys  
290 295 300

Leu Asn Trp Ile Ala Trp Phe Pro Phe Leu Leu Phe Asp Thr Asp Trp  
305 310 315 320

Met Gly Arg Glu Val Tyr Gly Gly Asp Ser Ser Gly Ser Ala Glu Gln

325	330	335	
Leu Lys Leu Tyr Asp Arg Gly Val Arg Ala Gly Ala Leu Gly Leu Met			
340	345	350	
Leu Asn Ser Val Val Leu Gly Phe Thr Ser Leu Gly Val Glu Val Leu			
355	360	365	
Ala Arg Gly Val Gly Gly Val Lys Arg Leu Trp Gly Ile Val Asn Phe			
370	375	380	
Val Leu Ala Val Cys Leu Ala Met Thr Val Leu Val Thr Lys Gln Ala			
385	390	395	400
Glu Ser Thr Arg Arg Phe Ala Thr Val Ser Gly Gly Ala Lys Val Pro			
405	410	415	
Leu Pro Pro Pro Ser Gly Val Lys Ala Gly Ala Leu Ala Leu Phe Ala			
420	425	430	
Val Met Gly Val Pro Gln Ala Ile Thr Tyr Ser Ile Pro Phe Ala Leu			
435	440	445	
Ala Ser Ile Phe Ser Asn Thr Ser Gly Ala Gly Gln Gly Leu Ser Leu			
450	455	460	
Gly Val Leu Asn Leu Ser Ile Val Ile Pro Gln Met Ile Val Ser Val			
465	470	475	480
Ala Ala Gly Pro Trp Asp Ala Leu Phe Gly Gly Gly Asn Leu Pro Ala			
485	490	495	
Phe Val Val Gly Ala Val Ala Ala Leu Ala Ser Gly Ile Phe Ala Leu			
500	505	510	
Thr Met Leu Pro Ser Pro Gln Pro Asp Met Pro Ser Ala Lys Ala Leu			
515	520	525	
Thr Ala Ala Phe His			
530			
<210> 28			
<211> 523			
<212> PRT			
<213> Vicia faba			
<400> 28			
Met Glu Pro Leu Ser Ser Thr Lys Gln Ile Asn Asn Asn Asn Leu			
1	5	10	15
Ala Lys Pro Ser Ser Leu His Val Glu Thr Gln Pro Leu Glu Pro Ser			
20	25	30	
Pro Leu Arg Lys Ile Met Val Val Ala Ser Ile Ala Ala Gly Val Gln			
35	40	45	
Phe Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln Leu			
50	55	60	
Leu Gly Ile His His Thr Trp Ala Ala Tyr Ile Trp Leu Cys Gly Pro			
65	70	75	80

Ile Ser Gly Met Leu Val Gln Pro Ile Val Gly Tyr His Ser Asp Arg  
85 90 95

Cys Thr Ser Arg Phe Gly Arg Arg Pro Phe Ile Ala Ala Gly Ser  
100 105 110

Ile Ala Val Ala Ile Ala Val Phe Leu Ile Gly Tyr Ala Ala Asp Leu  
115 120 125

Gly His Ser Phe Gly Asp Ser Leu Asp Gln Lys Val Arg Pro Arg Ala  
130 135 140

Ile Gly Ile Phe Val Val Gly Phe Trp Ile Leu Asp Val Ala Asn Asn  
145 150 155 160

Met Leu Gln Gly Pro Cys Arg Ala Leu Leu Gly Asp Leu Cys Ala Gly  
165 170 175

Asn Gln Arg Lys Thr Arg Asn Ala Asn Ala Phe Phe Ser Phe Phe Met  
180 185 190

Ala Val Gly Asn Val Leu Gly Tyr Ala Ala Gly Ala Tyr Ser Lys Leu  
195 200 205

Tyr His Val Phe Pro Phe Thr Lys Thr Lys Ala Cys Asn Val Tyr Cys  
210 215 220

Ala Asn Leu Lys Ser Cys Phe Phe Leu Ser Ile Ala Leu Leu Thr Val  
225 230 235 240

Leu Ala Thr Ser Ala Leu Ile Tyr Val Lys Glu Thr Ala Leu Thr Pro  
245 250 255

Glu Lys Thr Val Val Thr Thr Glu Asp Gly Gly Ser Ser Gly Gly Met  
260 265 270

Pro Cys Phe Gly Gln Leu Ser Gly Ala Phe Lys Glu Leu Lys Arg Pro  
275 280 285

Met Trp Ile Leu Leu Leu Val Thr Cys Leu Asn Trp Ile Ala Trp Phe  
290 295 300

Pro Phe Leu Leu Phe Asp Thr Asp Trp Met Gly Lys Glu Val Tyr Gly  
305 310 315 320

Gly Thr Val Gly Glu Gly His Ala Tyr Asp Met Gly Val Arg Glu Gly  
325 330 335

Ala Leu Gly Leu Met Leu Asn Ser Val Val Leu Gly Ala Thr Ser Leu  
340 345 350

Gly Val Asp Ile Leu Ala Arg Gly Val Gly Gly Val Lys Arg Leu Trp  
355 360 365

Gly Ile Val Asn Phe Leu Leu Ala Ile Cys Leu Gly Leu Thr Val Leu  
370 375 380

Val Thr Lys Leu Ala Gln His Ser Arg Gln Tyr Ala Pro Gly Thr Gly  
385 390 395 400

*BT*

Ala Leu Gly Asp Pro Leu Pro Pro Ser Glu Gly Ile Lys Ala Gly Ala  
405 410 415

Leu Thr Leu Phe Ser Val Leu Gly Val Pro Leu Ala Ile Thr Tyr Ser  
420 425 430

Ile Pro Phe Ala Leu Ala Ser Ile Phe Ser Ser Thr Ser Gly Ala Gly  
435 440 445

Gln Gly Leu Ser Leu Gly Val Leu Asn Leu Ala Ile Val Ile Pro Gln  
450 455 460

Met Phe Val Ser Val Leu Ser Gly Pro Trp Asp Ala Leu Phe Gly Gly  
465 470 475 480

Gly Asn Leu Pro Ala Phe Val Val Gly Ala Val Ala Ala Leu Ala Ser  
485 490 495

Gly Ile Leu Ser Ile Ile Leu Leu Pro Ser Pro Pro Pro Asp Met Ala  
500 505 510

Lys Ser Val Ser Ala Thr Gly Gly Phe His  
515 520

---

*Sub C1*  
*cont.*

*Concluded*